

## Chapter 5: Treatment Recommendations

### 5 Overview

Critical to the implementation of this Wildfire Mitigation Plan will be the identification of, and implementation of, an integrated schedule of treatments targeted at achieving an elimination of the lives lost, and reduction in structures destroyed, infrastructure compromised, and unique ecosystems damaged that serve to sustain the way-of-life and economy of Nez Perce County and the region. Since there are many land management agencies and thousands of private landowners in Nez Perce County, it is reasonable to expect that differing schedules of adoption will be made and varying degrees of compliance will be observed across all ownerships.

Nez Perce County encourages the philosophy of instilling disaster resistance in normal day-to-day operations. By implementing plan activities through existing programs and resources, the cost of mitigation is often a small portion of the overall cost of a project's design or program.

The federal land management agencies in Nez Perce County, specifically the Nez Perce Tribe and the Bureau of Land Management, are participants in this planning process and have contributed to its development. Where available, their schedule of land treatments have been considered in this planning process to better facilitate a correlation between their identified planning efforts and the efforts of Nez Perce County.

All risk assessments were made based on the conditions existing during 2004-05, thus, the recommendations in this section have been made in light of those conditions. However, the components of risk and the preparedness of the county's resources are not static. It will be necessary to fine-tune this plan's recommendations annually to adjust for changes in the components of risk, population density changes, infrastructure modifications, and other factors.

As part of the Policy of Nez Perce County in relation to this planning document, this entire **Wildfire Mitigation Plan** should be reviewed annually at a special meeting of the Nez Perce County Commissioners, open to the public and involving all municipalities/jurisdictions, where action items, priorities, budgets, and modifications can be made or confirmed. A written review of the plan should be prepared (or arranged) by the Chairman of the County Commissioners, detailing plans for the year's activities, and made available to the general public ahead of the meeting (in accord with the Idaho Open Public Meeting Laws). Amendments to the plan should be detailed at this meeting, documented, and attached to the formal plan as an amendment to the Wildfire Mitigation Plan. Re-evaluation of this plan should be made on the 5<sup>th</sup> anniversary of its acceptance, and every 5-year period following.

#### 5.1 Annual Prioritization of Activities

The annual prioritization process will include a special emphasis on cost-benefit analysis review. The process will reflect that a key component in funding decision is a determination that the project will provide an equivalent or more in benefits over the life of the project when compared with the costs. Projects will be administered by local jurisdictions with overall coordination provided by the Nez Perce County Emergency Management Coordinator.

Nez Perce County Commissioners and the elected officials of all jurisdictions will evaluate opportunities and establish their own unique priorities to accomplish mitigation activities where existing funds and resources are available and there is community interest in implementing mitigation measures. If no federal funding is used in these situations, the prioritization process may be less formal and not tied to a strict benefit-cost model, but rather to a willingness to

simply implement hazard mitigation. Often the types of projects that Nez Perce County can afford to do on their own are in relation to improved codes and standards, department planning and preparedness, and education. These types of projects may not meet the traditional project model, selection criteria, and benefit-cost model. Nez Perce County will consider all pre-disaster mitigation proposals brought before the county commissioners by county department heads, city officials, fire districts and local civic groups.

When federal or state funding is available for hazard mitigation, there are usually requirements that establish a rigorous benefit-cost analysis as a predominate criteria in establishing project priorities. The county will understand the basic federal grant program criteria which will drive the identification, selection, and funding of the most competitive and worthy mitigation projects. FEMA's three grant programs (the post-disaster Hazard Mitigation Grant Program, the pre-disaster Flood Mitigation Assistance and Pre-Disaster Mitigation grant programs) that offer federal mitigation funding to state and local governments all include the benefit-cost and repetitive loss selection criteria.

The prioritization of projects will occur annually and be facilitated by the Nez Perce County Emergency Services Director to include the County Commissioner's Office, City Mayors and Councils, Fire District Chiefs and Commissioners, agency representatives (USFS, BLM, State Lands, etc.). The prioritization of projects will be based on the selection of projects which create a balanced approach to pre-disaster mitigation which recognizes the hierarchy of treating in order (highest first):

- People and Structures
- Infrastructure
- Local and Regional Economy
- Traditional Way of Life
- Ecosystems

While developing and analyzing projects based this hierarchy, specific projects will be evaluated for their intrinsic benefit/cost analysis results, overall benefit to the public good, opportunities for leveraging results from other projects in the county, and coordinating with multi-county activities resulting in specific risk reduction within Nez Perce County. The analysis process will include summaries as appropriate for each project, but will include benefit / cost analysis results, which will be one of the criteria for project selection. Projects with a negative benefit / cost analysis result will only be considered in specific circumstances. As a guideline, the decision will be to further consider investments having a B/C Ratio greater than or equal to 1, and reject projects that have a B/C Ratio less than 1. When multiple projects are considered, decision makers will rank by B/C ratio and give the highest ranking projects priority under this criteria. Other criteria will influence final project ranking.

## ***5.2 Possible Fire Mitigation Activities***

As part of the implementation of fire mitigation activities in Nez Perce County, a variety of management tools may be used. Management tools include but are not limited to the following:

- Homeowner and landowner education
- Building code changes for structures and infrastructure in the WUI
- Home site defensible zone through fuels modification
- Community defensible zone fuels alteration

- Access improvements
- Access creation
- Emergency response enhancements (training, equipment, locating new fire stations, new fire districts, merging existing districts)
- Regional land management recommendations for private, state, and federal landowners

Maintaining private property rights will continue to be one of the guiding principles of this plan's implementation. Sound risk management is a foundation for all fire management activities. Risks and uncertainties relating to fire management activities must be understood, analyzed, communicated, and managed as they relate to the cost of either doing or not doing an activity. Net gains to the public benefit will be an important component of decisions.

### **5.3 WUI Safety & Policy**

Wildfire mitigation efforts must be supported by a set of policies and regulations at the county level that maintain a solid foundation for safety and consistency. The recommendations enumerated here serve that purpose. Because these items are regulatory in nature, they will not necessarily be accompanied by cost estimates. These recommendations are policy related in nature and therefore are recommendations to the appropriate elected officials; debate and formulation of alternatives will serve to make these recommendations suitable and appropriate.

As part of the Policy of Nez Perce County in relation to this planning document, this entire **Wildland-Urban Interface Wildfire Mitigation Plan** should be reviewed annually at a special meeting of the Nez Perce County Commissioners, open to the public, where action items, priorities, budgets, and modifications can be made or confirmed. A written review of the plan should be approved by the Chairman of the County Commissioners, detailing plans for the year's activities, and made available to the general public ahead of the meeting (in accord with the Idaho Open Public Meeting Laws). Amendments to the plan should be detailed at this meeting, documented, and attached to the formal plan as an amendment to the WUI Wildfire Mitigation Plan (signatures by the cooperators would be collected at the Chairman's discretion). Re-evaluation of this plan should be made on the 5<sup>th</sup> anniversary of its acceptance, and every 5-year period following.

Prioritization of activities recommended in this plan should be made by the Nez Perce County Commissioners consistent with the recommendations made in Chapter 1 of this document. During the annual review of this plan, reprioritization can be justified in response to changing conditions and funding opportunities.

#### **5.3.1 Existing Practices That Should Continue**

Nez Perce County currently is implementing many projects and activities that, in their absence, could lead to increased wildland fire loss potential. By enumerating some of them here, it is the desire of the authors to point out successful activities.

- Existing rural addressing efforts have aided emergency responses well.
- The current 911 service in the county is an excellent service that is currently dispatched out of Nez Perce County. Activities that build on the rural addressing and current emergency services to develop an Enhanced 911 service would serve the county well.

### 5.3.2 Proposed Activities

Table 5.1. WUI Action Items in Safety and Policy.

| Action Item   | Goals and Objectives  | Responsible Organization  | Action Items & Planning Horizon  |
|---|---|---|--|
| <b>5.1.a: Amend existing building codes to apply equally to new single housing construction as it does to sub-divisions.</b><br>Make sure existing policy is comprehensive to wildland fire risks.  | <b>Protection of people and structures</b> by applying a standard of road widths, access, and building regulations suitable to insure new homes can be protected while minimizing risks to firefighters. (defensible space, roads and access management, water systems, building codes, signage, and maintenance of private forest and range lands) | <b>County Commissioners</b> in cooperation with Rural Fire Districts and Planning and Zoning. | <ul style="list-style-type: none"> <li>Year 1 debate and adoption of revised code (2005).</li> <li>Review adequacy of changes annually, make changes as needed.</li> </ul>   |
| <b>5.1.b: Develop County policy concerning building materials used in high-risk WUI areas on existing structures and new construction</b>   | <b>Protection of people and structures</b> by improving the ability of emergency response personnel to respond to threatened homes in high-risk areas.  | <b>County Commissioners Office</b> in cooperation with Rural Fire Departments                 | <b>Year 1 (2005) activity:</b><br>Consider and develop policy to address construction materials for homes and businesses located in high wildfire risk areas. Specifically, a County policy concerning wooden roofing materials and flammable siding, especially where juxtaposed near heavy wildland fuels.     |
| <b>5.1.c: Adoption of International Fire Code and creation of a County Fire Warden/Chief position that would lead the Nez Perce County Fire Department and inspect sites for compliance to the International Fire Code as well as enforce the mandates of the Code.</b> | <b>Protection of people and structures</b> by improving the ability of emergency services personnel to safely and effectively respond to homes.   | <b>Planning and Zoning</b> with County Commissioners Office and Rural Fire Departments.       | <b>Year 1 (2005) activity:</b><br>Consider and develop policy to enforce the International Fire Code regulations already adopted by the State of Idaho and seek funding to create a County Fire Warden/Chief position.   |
| <b>5.1.d: Develop a formal WUI Advisory Committee to advise County Commissioners on WUI Issues and Treatments</b>   | <b>Protection of people and structures</b> by improving the ability of decision makers to make informed decisions about wildfire issues.  | <b>County Commissioners Office</b>  | <b>Year 1 (2005) activity:</b><br>Formalize a committee, its membership and service decided on by the County Commissioners, to collaborate on WUI issues within Nez Perce County. Members potentially to include land management organizations and companies, private landowners, and fire protection personnel. |
| <b>5.1.e: Develop a County Commissioner's Office</b>  | <b>Protection of people and structures</b> by improving   | <b>County Commissioners Office</b>  | <b>Ongoing activity:</b> Support grant applications as   |

**Table 5.1. WUI Action Items in Safety and Policy.**

| <b>Action Item</b>   | <b>Goals and Objectives</b>  | <b>Responsible Organization</b> | <b>Action Items &amp; Planning Horizon</b>   |
|--|--|---------------------------------|--|
| <b>policy to support the applications for grant monies for projects resulting from recommendations in this plan.</b> | the ability of residents and organizations to implement sometimes costly projects. |                                 | requested in a manner consistent with applications from residents and organizations in Nez Perce County. |

## **5.4 People and Structures**

The protection of people and structures will be tied together closely as the loss of life in the event of a wildland fire is generally linked to a person who could not, or did not, flee a structure threatened by a wildfire. The other incident is a fire fighter who suffers the loss of life during the combating of a fire. Many of the recommendations in this section will define a set of criteria for implementation while others will be rather specific in extent and application.

Many of the recommendations in this section involve education and increasing awareness of the residents of Nez Perce County. These recommendations stem from a variety of factors including items that became obvious during the analysis of the public surveys, discussions during public meetings, and observations about choices made by residents living in the Wildland-Urban Interface. Over and over, a common theme was present that pointed to a situation of landowners not recognizing risk factors:

- Homeowners in the public mail survey ranked their home site wildfire risk factors significantly lower than a random sample of home rankings completed by fire mitigation specialists.
- Fire District personnel pointed to numerous examples of inadequate access to homes of people who believe they have adequate ingress.
- Discussions with the general public indicated an awareness of wildland fire risk, but they could not specifically identify risk factors.
- Over half of the respondents to the public mail survey indicated (53%) that they want to participate in educational opportunities focused on the WUI and what they can do to increase their home's chances of surviving a wildfire.

In addition to those items enumerated in Table 5.1, residents and policy makers of Nez Perce County should recognize certain factors that exist today, that in their absence would lead to an increase in the risk factors associated with wildland fires in the WUI of Nez Perce County. These items listed below should be encouraged, acknowledged, and recognized for their contributions to the reduction of wildland fire risks:

- **Livestock Grazing** in and around the communities of Nez Perce County has led to a reduction of many of the fine fuels that would have been found in and around the communities and in the wildlands of Nez Perce County. Domestic livestock not only eat these grasses, forbs, and shrubs, but also trample certain fuels to the ground where decomposition rates may increase. Livestock ranchers tend their stock, placing resource professionals into the forests and rangelands of the area where they may observe ignitions, or potentially risky activities. There are ample opportunities throughout the county to increase grazing. This could contribute to the economic output of the county

as well as reduce the fuel loading. Livestock grazing in this region should be encouraged into the future as a low cost, positive tool of wildfire mitigation in the Wildland-Urban Interface and in the wildlands.

- **Forest Management** in Nez Perce County by the Idaho Department of Lands and the Potlatch Corporation and many of the private and other industrial forestland owners in the region has led to a significant reduction of wildland fuels where they are closest to homes and infrastructure. In addition, forest resource professionals managing these lands and the lands of the private owners and federal agencies are generally trained in wildfire protection and recognize risk factors when they occur. One of the reasons that Nez Perce County forestlands have not been impacted by wildland fires to a greater degree historically, is the presence and activities related to active forest management.
- **Agriculture** is a significant component of Nez Perce County's economy. Much of the county is occupied with the production of agricultural crops. The original conversion of these lands to agriculture from range and forestland, was targeted at the most productive soils and juxtaposition to infrastructure. Many of these productive ecosystems were consequently also at some of the highest risk to wildland fires because biomass accumulations increased in these productive landscapes. The result today, is that much of the rangeland historically prone to frequent fires, has been converted to agriculture, which is at a much lower risk than prior to its conversion. The preservation of a viable agricultural economy in Nez Perce County is integral to the continued management of wildfire risk in this region.

**Table 5.2. WUI Action Items for People and Structures.**

| <b>Action Item</b>   | <b>Goals and Objectives</b>   | <b>Responsible Organization</b>   | <b>Action Items, Planning Horizon and Estimated Costs</b>   |
|--|---|---|---|
| <b>5.2.a: Youth and Adult Wildfire Educational Programs</b>  | <b>Protect people and structures</b> by increasing awareness of WUI risks, how to recognize risk factors, and how to modify those factors to reduce risk  | Cooperative effort including: <ul style="list-style-type: none"> <li>University of Idaho Cooperative Extension</li> <li>Idaho Department of Lands</li> <li>Nez Perce Tribal, and State and Private Forestry Offices</li> <li>Bureau of Land Management</li> <li>Local School Districts</li> <li>Local Fire Departments</li> </ul> | Evaluate effectiveness of currently funded County education programs. If possible, use existing educational program materials and staffing. These programs may need reformatted.<br>Formal needs assessment should be responsibility of University of Idaho Cooperative Extension faculty and include the development of an integrated WUI educational series by year 3 (2006). Costs initially to be funded through existing budgets for these activities to be followed with grant monies to continue the programs as identified in the formal needs assessment.<br>Detailed information regarding home defensible space requirements is contained on the FireWise CD, which can be purchased and personalized by the County. The CD costs \$2,500. |
| <b>5.2.b: Wildfire risk assessments of homes in identified communities</b>   | <b>Protect people and structures</b> by increasing awareness of specific risk factors of individual home sites in the at-risk landscapes. Only after these are completed can home site treatments follow. | To be implemented by <b>County Commissioners Office</b> in cooperation with the <b>Rural Fire Departments</b> . Actual work may be completed by Wildfire Mitigation Consultants or trained volunteers.  | <ul style="list-style-type: none"> <li><b>Cost:</b> Approximately \$100 per home site for inspection, written report, and discussions with the homeowners.</li> <li>There are approximately 15,285 housing units in Nez Perce County, many of these structures would benefit from a home site inspection.</li> <li><b>Action Item:</b> Secure funding and contract to complete the inspections during years 1 &amp; 2 (2005-06)</li> <li>Home site inspection reports and estimated budget for each home site's treatments will be a requirement to receive funding for treatments through grants.</li> </ul>   |
| <ul style="list-style-type: none"> <li>Agatha – 75 homes, 90% need Home defensibility inspections, cost estimate of \$6,750</li> <li>Arrow – 64 homes, 90% need Home defensibility inspections, cost estimate of \$5,760</li> <li>Culdesac – 258 homes, 40% need Home defensibility inspections, cost estimate of \$10,320</li> <li>Gifford – 44 homes, 40% need Home defensibility inspections, cost estimate of \$1,760</li> <li>Lapwai – 446 homes, 40% need Home defensibility inspections, cost estimate of \$17,840</li> <li>Leland – 72 homes, 25% need Home defensibility inspections, cost estimate of \$1,800</li> <li>Lenore – 137 homes, 80% need Home defensibility inspections, cost estimate of \$10,960</li> <li>Lewiston – 120 homes (outside of city limits), 25% need Home defensibility inspections, cost estimate of \$3,000</li> <li>Lookout – 50 homes, 90% need Home defensibility inspections, cost estimate of \$4,500</li> <li>Melrose – 45 homes, 60% need Home defensibility inspections, cost estimate of \$2,700</li> <li>Peck – 263 homes, 90% need Home defensibility inspections, cost estimate of \$23,670</li> <li>Slickpoo – 66 homes, 70% need Home defensibility inspections, cost estimate of \$4,620</li> </ul> |   |   |   |

**Table 5.2. WUI Action Items for People and Structures.**

| Action Item                            | Goals and Objectives   | Responsible Organization   | Action Items, Planning Horizon and Estimated Costs  |
|--|--|--|---|
|  | <ul style="list-style-type: none"> <li>Southwick – 140 homes, 25% need Home defensibility inspections, cost estimate of \$3,500</li> <li>Spalding – 118 homes, 50% need Home defensibility inspections, cost estimate of \$5,900</li> <li>Summit – 30 homes, 60% need Home defensibility inspections, cost estimate of \$1,800</li> <li>Sweetwater – 205 homes, 60% need Home defensibility inspections, cost estimate of \$12,300</li> <li>Waha – 140 homes, 100% need Home defensibility inspections, cost estimate of \$14,000</li> <li>Webb – 37 homes, 90% need Home defensibility inspections, cost estimate of \$3,330</li> <li>Other Rural Homes – 4,092 homes, 30% need Home defensibility inspections, cost estimate of \$122,760</li> </ul>   |  |   |
|  | <ul style="list-style-type: none"> <li><b>Total Cost Estimate for this item: \$257,270</b></li> </ul>  |  |   |
| <b>5.2.c: Home Site WUI Treatments</b> | <b>Protect people, structures, and increase fire fighter safety</b> by reducing the risk factors surrounding homes in the WUI of Nez Perce County  | <p><b>County Commissioners</b> in cooperation with Fire Mitigation Consulting company and Rural Fire Districts</p> <p><i>Complete concurrently with 5.4.b.</i></p> | <ul style="list-style-type: none"> <li>Actual funding level will be based on the outcomes of the home site assessments and cost estimates</li> <li><b>Estimate</b> that treatments will cost approximately \$800 per home site for a defensible space of roughly 150’.</li> <li>Home site treatments can begin after the securing of funding for the treatments and immediate implementation in 2004 and will continue from year 1 through 5 (2008).</li> </ul> |
|  | <ul style="list-style-type: none"> <li>Agatha – 75 homes, 90% need Home defensibility projects, cost estimate of \$54,000</li> <li>Arrow – 64 homes, 90% need Home defensibility projects, cost estimate of \$46,080</li> <li>Culdesac – 258 homes, 40% need Home defensibility projects, cost estimate of \$82,560</li> <li>Gifford – 44 homes, 40% need Home defensibility projects, cost estimate of \$14,080</li> <li>Lapwai – 446 homes, 40% need Home defensibility projects, cost estimate of \$142,720</li> <li>Leland – 72 homes, 25% need Home defensibility projects, cost estimate of \$14,400</li> <li>Lenore – 137 homes, 80% need Home defensibility projects, cost estimate of \$87,680</li> <li>Lewiston – 120 homes (outside of city limits), 25% need Home defensibility projects, cost estimate of \$24,000</li> <li>Lookout – 50 homes, 90% need Home defensibility projects, cost estimate of \$36,000</li> <li>Melrose – 45 homes, 60% need Home defensibility projects, cost estimate of \$21,600</li> <li>Peck – 263 homes, 90% need Home defensibility projects, cost estimate of \$189,360</li> <li>Slickpoo – 66 homes, 70% need Home defensibility projects, cost estimate of \$36,960</li> <li>Southwick – 140 homes, 25% need Home defensibility projects, cost estimate of \$28,000</li> <li>Spalding – 118 homes, 50% need Home defensibility projects, cost estimate of \$47,200</li> <li>Summit – 30 homes, 60% need Home defensibility projects, cost estimate of \$14,400</li> <li>Sweetwater – 205 homes, 60% need Home defensibility projects, cost estimate of \$98,400</li> </ul> |  |   |



**Table 5.2. WUI Action Items for People and Structures.**

| Action Item  | Goals and Objectives  | Responsible Organization   | Action Items, Planning Horizon and Estimated Costs  |
|--|---|--|---|
|  | <ul style="list-style-type: none"> <li>Waha – 140 homes, 100% need Home defensibility projects, cost estimate of \$112,000</li> <li>Webb – 37 homes, 90% need Home defensibility projects, cost estimate of \$26,640</li> <li>Other Rural Homes – 4,092 homes, 30% need Home defensibility projects, cost estimate of \$ 982,080</li> </ul> |  |   |
|  | • <b>Total Cost Estimate for this item: \$ 2,058,160</b>  |  |   |
| <b>5.2.d: Community Defensible Zone WUI Treatments</b> | <b>Protect people, structures, and increase fire fighter safety</b> by reducing the risk factors surrounding high risk communities in the WUI of Nez Perce County   | <b>County Commissioners</b> in cooperation with Fire Mitigation Consultants and Rural Fire Districts | <ul style="list-style-type: none"> <li>Actual funding level will be based on the outcomes of the home site assessments and cost estimates.</li> <li><b>Years 2-5 (2005-09):</b> Treat high risk wildland fuels from home site defensible space treatments (5.4.c) to an area extending 400 feet to 750 feet beyond home defensible spaces, where steep slopes and high accumulations of risky fuels exist. Should link together home treatment areas. Treatments target high risk concentrations of fuels and not 100% of the area identified. To be completed only after or during the creation of home defensible spaces have been implemented.</li> <li><b>Communities and areas to target:</b> Waha, Soldiers Meadow, Gifford, Peck, Lenore, Culdesac, Myrtle, Lewiston, Kendrick, Juliaetta, Cottonwood Creek, and Lapwai.</li> <li>Approximate average cost on a per structure basis is \$750-\$1,500 depending on extent of home defensibility site treatments, for a cost estimate of \$1.0 million. Couple this cost with the home defensibility space costs of \$1.3 million. The number of structures to benefit from these treatments include both homes and businesses (assessed value of \$20,942,402). The <b>average B/C Ratio for these treatments combined in Nez Perce County is 70:1</b>. Actual B/C ration by community will be variable.</li> </ul> |
| <b>5.2.e: Maintenance of Home Site WUI Treatments</b>  | <b>Protect people, structures, and increase fire fighter safety</b> by reducing the risk factors surrounding homes in the WUI of Nez Perce County   | <b>County Commissioners Office</b> in cooperation with Rural Fire Departments and local home owners  | <ul style="list-style-type: none"> <li>Home site defensibility treatments must be maintained periodically to sustain benefits of the initial treatments.</li> <li>Each site should be assessed 5 years following initial treatment</li> <li>Estimated re-inspection cost will be \$50 per home site on all sites initially treated or recommended for future inspections (\$65,000)</li> <li>Follow-up inspection reports with treatments as recommended years 5 through 10.</li> </ul>   |
| <b>5.2.f: Re-entry of Home Site WUI Treatments</b>     | <b>Protect people, structures, and increase</b>   | <b>County Commissioners Office</b> in cooperation with Rural Fire                                    | <ul style="list-style-type: none"> <li>Re-entry treatments will be needed periodically to maintain the benefits of the initial WUI home treatments. Each re-entry</li> </ul>  |

**Table 5.2. WUI Action Items for People and Structures.**

| <b>Action Item</b>  | <b>Goals and Objectives</b>  | <b>Responsible Organization</b>   | <b>Action Items, Planning Horizon and Estimated Costs</b>  |
|---|--|---|--|
|   | <b>fire fighter safety</b> by reducing the risk factors surrounding homes in the WUI of Nez Perce County   | Departments and local home owners   | schedule should be based on the initial inspection report recommendations, observations, and changes in local conditions. Generally occurs every 5-10 years.   |
| <b>5.2.g: Access Improvements of bridges, cattle guards, and limiting road surfaces. Tie information to emergency 911 system.</b> | <b>Protection of people, structures, infrastructure, and economy</b> by improving access for residents and fire fighting personnel in the event of a wildfire. Reduces the risk of a road failure that leads to the isolation of people or the limitation of emergency vehicle and personnel access during an emergency. | <b>County Roads and Bridges Department</b> in cooperation with BLM, State of Idaho (Lands and Transportation), and forestland or rangeland owners as well as County Commissioners and Emergency Dispatch. | <ul style="list-style-type: none"> <li>• <b>Year 1 (2005):</b> Update existing assessment of travel surfaces, bridges, and cattle guards in Nez Perce County as to location. Secure funding for implementation of this project (grants). Provide assessment information to Emergency 911 Dispatch, so information can be forwarded to first responders during an emergency. Update information system as necessary.</li> <li>• <b>Year 2 (2006):</b> Conduct engineering assessment of limiting weight restrictions for all surfaces (e.g., bridge weight load maximums). Estimate cost of \$275,000 which might be shared between County, BLM, State, and private based on landownership associated with road locations.</li> <li>• <b>Year 2 (2007):</b> Post weight restriction signs on all crossings, copy information to rural fire districts and wildland fire protection agencies in affected areas. Estimate cost at roughly \$25-\$30,000 for signs and posting.</li> <li>• <b>Year 3 (2008):</b> Identify limiting road surfaces in need of improvements to support wildland fire fighting vehicles and other emergency equipment. Develop plan for improving limiting surfaces including budgets, timing, and resources to be protected for prioritization of projects (benefit/cost ratio analysis). Create budget based on full assessment.</li> </ul> |
| <b>5.2.h: Access Improvements for communities of Waha, Soldiers Meadow, Cottonwood Creek, Peck, and Gifford.</b>                  | <b>Protection of people, structures, infrastructure, and economy</b> by improving access for residents and fire fighting personnel in the event of a wildfire. Allows for alternative escape route when the primary access is compromised.   | <b>County Roads and Bridges Department</b> in cooperation with BLM, State of Idaho (Lands and Transportation), industrial forestland owners.  | <ul style="list-style-type: none"> <li>• <b>Year 1 (2005):</b> Update existing assessment of Soldiers Meadow Road, Waha Road, Peck Ridge Grade, and County Route P3 as to limiting areas of road and bridges. Secure funding for implementation of this project based on ownership and use.</li> <li>• <b>Year 2 (2006):</b> Secure funding and implement projects to improve limiting access along this road to facilitate broader range of vehicles using this route as an emergency route. No estimate of costs until priorities are set and options identified.</li> </ul>   |

**Table 5.2. WUI Action Items for People and Structures.**

| <b>Action Item</b>  | <b>Goals and Objectives</b>  | <b>Responsible Organization</b>   | <b>Action Items, Planning Horizon and Estimated Costs</b>   |
|---|--|---|---|
| <b>5.2.i: Access Improvements through road-side fuels management. [Waha Road, Soldiers Meadow Road, Central Grade, and County Route P3]</b> | <p><b>Protection of people, structures, infrastructure, and economy</b> by improving access for residents and fire fighting personnel in the event of a wildfire.</p> <p>Allows for a road based defensible area that can be linked to a terrain based defensible areas.</p> | <p><b>County Roads and Bridges Department</b> in cooperation with BLM, State of Idaho (Lands and Transportation), and forestland or rangeland owners.</p> | <ul style="list-style-type: none"> <li>• <b>Year 1 (2005):</b> Update existing assessment of roads in Nez Perce County as to location. Secure funding for implementation of this project (grants).</li> <li>• <b>Year 2 (2006):</b> Specifically address access issues listed in column one, plus recreation areas, and others identified in assessment. Target 100' on downhill side of roads and 75' on uphill side for estimated cost of \$15,000 per mile of road treated. If 350 miles of roadway are prioritized for treatment (est.) the cost would amount to \$ 5,250,000. <b>B/C Ratio of 31:1 is achieved</b>, but is highly variable. Further, the total value of structures in the county is not "protected" by this type of treatment.</li> <li>• <b>Year 3 (2007):</b> Secure funding and implement projects to treat road-side fuels.</li> </ul> |

## 5.5 Infrastructure

Significant infrastructure refers to the communications, transportation (road and rail networks), energy transport supply systems (gas and power lines), and water supply that service a region or a surrounding area. All of these components are important to Nez Perce County. These networks are by definition a part of the Wildland-Urban Interface in the protection of people, structures, **infrastructure**, and unique ecosystems. Without supporting infrastructure a community's structures may be protected, but the economy and way of life lost. As such, a variety of components will be considered here in terms of management philosophy, potential policy recommendations, and on-the-ground activities.

**Communication Infrastructure:** This component of the WUI seems to be diversified across the county with multiple source and destination points, and a spread-out support network. Although site specific treatments will impact local networks directly, little needs done to insure the system's viability.

The radio communication network does not provide adequate communications coverage or connectivity for the rural parts of Nez Perce County. The only Fire/EMS repeater for rural departments is on Lewiston Ridge. The connectivity provided by this single repeater is less than 75% of the County, resulting in numerous radio dead zones, including the populated areas of Culdesac and Peck. This degrades response time and requires emergency response units to drive to a radio active site before they can communicate with dispatch, such as to request mutual aid.

**Transportation Infrastructure (road and rail networks):** This component of the WUI has some potential limitations in Nez Perce County. The hub of Nez Perce County's transportation network is located in Lewiston (as the County Seat and industrial nucleus for northern Idaho). Specific infrastructure components have been discussed in this plan.

There is currently only one active railroad in Nez Perce County. The First Subdivision of the Camas Prairie Railroad makes a weekly trip down the Clearwater River hauling logs and other materials between Kamiah and the Potlatch Corporation mill in Lewiston. There are a number of curves and sidings where a train may be prone to create sparks, eject hot stack carbon, or blow hot brake shoes, any one of which can easily ignite the light fuels along the railroad corridor. Although there is some potential, this right-of-way has not been a significant source of fire ignitions and is therefore not a priority for fire mitigation treatment in Nez Perce County.

Ignitions along highways are significant and should be addressed as part of the implementation of this plan. Various alternatives from herbicides to intensive livestock grazing coupled with mechanical treatments, have been suggested. As part of the multi-agency WUI team proposed in the previous section, these corridors should be further evaluated with alternatives implemented. A variety of approaches will be appropriate depending on the landowner, fuels present, and other factors. These ignitions are substantial and the potential risk of lives in the area is significant.

Many roads in the county have limiting characteristics, such as steep grades, narrow travel surfaces, sharp turning radii, low load limit bridges and cattle guards, and heavy accumulations of fuels adjacent to, and overtopping some roads. Some of these road surfaces access remote forestland and rangeland areas. While their improvements will facilitate access in the case of a wildfire, they are not necessarily the priority for treatments in the county.

Roads that have these inferior characteristics and access homes and businesses are the priority for improvements in the county. Specific recommendations for these roads are enumerated in Table 5.3.

### **Energy Transport Supply Systems (gas and power lines):** (Nez Perce County - Appendix I)

A number of power lines crisscross Nez Perce County. Unfortunately, many of these power lines cross over forestland ecosystems. When fires ignite in these vegetation types, the fires tend to be slower moving and burn at relatively high intensities. Additionally, there is a potential for high temperatures and low humidity with high winds to produce enough heat and smoke to threaten power line stability. Most power line corridors have been cleared of vegetation both near the wires and from the ground below. Observations across the county of these high tension power lines lead to the conclusion that current conditions coupled with urban developments have mitigated this potential substantially. It is the recommendation of this Wildfire Mitigation Plan that this situation be evaluated annually and monitored but that treatments not be specifically targeted at this time. The use of these areas as “fire breaks” should be evaluated further, especially in light of the treatments enumerated in this plan (e.g., intensive livestock grazing, mechanical treatments, and herbicide treatments).

**Water Supply:** In many of Idaho’s communities, water is derived from surface flow that is treated and piped to homes and businesses. When wildfires burn a region, they threaten these watersheds by the removal of vegetation, creation of ash and sediment. As such, watersheds should be afforded the highest level of protection from catastrophic wildfire impacts. In Nez Perce County, water is supplied to many homes by single home or multiple home wells.

## **5.5.1 Proposed Activities**

**Table 5.3. Infrastructure Enhancements.**

| <b>Action Item</b>   | <b>Goals and Objectives</b>  | <b>Responsible Organization</b>  | <b>Action Items &amp; Planning Horizon</b>  |
|--|--|--|---|
| <b>5.3.a: Post FEMA “Emergency Evacuation Route” signs along the identified Primary and secondary access routes in the county.</b>                           | <b>Protection of people and structures</b> by informing residents and visitors of <b>significant infrastructure</b> in the county that will be maintained in the case of an emergency. | <b>County Commissioners</b> in cooperation with Rural Fire Districts and Roads Department. | <ul style="list-style-type: none"><li>• Purchase of signs (2005).</li><li>• Posting roads and make information available to residents of the importance of Emergency Routes</li></ul>                     |
| <b>5.3.b: Fuels mitigation of the FEMA “Emergency Evacuation Routes” in the county to insure these routes can be maintained in the case of an emergency.</b> | <b>Protection of people and structures</b> by providing residents and visitors with ingress and egress that can be maintained during an emergency.                                     | <b>County Commissioners</b> in cooperation with Rural Fire Districts and Roads Department. | <ul style="list-style-type: none"><li>• Full assessment of road defensibility and ownership participation (2005).</li><li>• Implementation of projects (linked to item 5.2.g, 5.2.h, and 5.2.i.</li></ul> |

## **5.6 Resource and Capability Enhancements**

There are a number of resource and capability enhancements identified by the rural and wildland fire fighting districts in Nez Perce County. All of the needs identified by the districts are in line with increasing the ability to respond to emergencies in the WUI and are fully supported by the planning committee.

Specific reoccurring themes of needed resources and capabilities include:

- Improved radio capabilities within each district and for mutual aid operations
- Retention and recruitment of volunteers

- Training and development of rural firefighters in structure and wildland fire
- Incorporation of communities into current fire districts or the formation of a new district specifically for these residents.

The implementation of each issue will rely on either the isolated efforts of the fire districts or a concerted effort by the county to achieve equitable enhancements across all of the districts. Given historic trends, individual departments competing against neighboring departments for grant monies and equipment will not necessarily achieve county wide equity. However, the Clearwater RC&D may be an organization uniquely suited to work with all of the districts in Nez Perce County and adjacent counties to assist in the prioritization of needs across district and even county lines. Once prioritized, the RC&D is in a position to assist these districts with identifying, competing for, and obtaining grants and equipment to meet these needs.

**Table 5.4. WUI Action Items in Fire Fighting Resources and Capabilities.**

| <b>Action Item</b>   | <b>Goals and Objectives</b>   | <b>Responsible Organization</b>   | <b>Action Items &amp; Planning Horizon</b>   |
|--|---|---|--|
| <b>5.4.a: Enhance radio availability in each district, link into existing dispatch, and improve range within the region, update to new digital, narrow band frequency adopted by feds and state.</b> | <b>Protection of people and structures</b> by direct fire fighting capability enhancements. | <b>Idaho Department of Lands</b> in cooperation with rural and wildland fire districts and County Commissioners                                       | <ul style="list-style-type: none"> <li>• <b>Year 1 (2005):</b> Summarize existing two-way radio capabilities and limitations. Identify opportunities for radio repeater towers located in the region for multi-county benefits. Upgrade existing equipment and locate funding opportunities.</li> <li>• <b>Year 2 (2006):</b> Acquire and install upgrades and new equipment as needed. Complete feasibility study for repeater locations.</li> <li>• <b>Year 2-3 (2006-07):</b> Acquire equipment, land, and personnel to erect repeaters on designated sites.</li> </ul> |
| <b>5.4.b: Retention of Volunteer Fire Fighters</b>   | <b>Protection of people and structures</b> by direct fire fighting capability enhancements. | <b>Rural and Wildland Fire Districts</b> working with broad base of county citizenry to identify options, determine plan of action, and implement it. | <ul style="list-style-type: none"> <li>• 5 Year Planning Horizon, extended planning time frame</li> <li>• Target an increased recruitment (+10%) and retention (+20% longevity) of volunteers</li> <li>• <b>Year 1 (2005):</b> Develop incentives program and implement it.</li> </ul>   |

**Table 5.4. WUI Action Items in Fire Fighting Resources and Capabilities.**

| <b>Action Item</b>  | <b>Goals and Objectives</b>   | <b>Responsible Organization</b>   | <b>Action Items &amp; Planning Horizon</b>  |
|---|---|---|---|
| <b>5.4.c: Identify areas lacking a sufficient water supply and develop publicly accessible fill sites.</b>  | <b>Protection of people and structures</b> by direct fire fighting capability enhancements. | <b>County Commissioners</b> and rural and wildland fire districts   | <ul style="list-style-type: none"> <li>Identify populated areas lacking sufficient water supplies and develop project plans to develop fill or helicopter dipping sites.</li> <li>Implement project plans.</li> </ul>   |
| <b>5.4.d: Facility, land, business plan and basic supplies for new Lewiston Rural Fire Protection, which will include the Waha community.</b>             | <b>Protection of people and structures</b> by direct fire fighting capability enhancements. | <b>Clearwater Resource Conservation and Development Council</b> in cooperation with Commissioners and fire districts.   | <ul style="list-style-type: none"> <li>Estimate of Costs: <ul style="list-style-type: none"> <li>\$500,000</li> </ul> </li> <li><b>2 Year Planning Horizon</b></li> </ul>   |
| <b>5.4.e: Wildland engine for Nez Perce County Fire Department.</b>   | <b>Protection of people and structures</b> by direct fire fighting capability enhancements. | <b>Nez Perce County Fire Department</b>   | <ul style="list-style-type: none"> <li><b>Year 1 (2004):</b> Verify stated need still exists, develop budget, and locate funding or equipment (surplus) sources.</li> <li><b>Year 1 or 2 (2004-05):</b> Acquire and deliver needed equipment to stations based on prioritization by need and funding awards</li> </ul>  |
| <b>5.4.f: Facility, land, business plan and basic supplies for new Clearwater Canyon Fire Protection District.</b>  | <b>Protection of people and structures</b> by direct fire fighting capability enhancements. | <b>Clearwater Resource Conservation and Development Council</b> in cooperation with Commissioners and fire districts.   | <ul style="list-style-type: none"> <li>Estimate of Costs: <ul style="list-style-type: none"> <li>\$500,000</li> </ul> </li> <li><b>2 Year Planning Horizon</b></li> </ul>   |
| <b>5.4.g: Increased training and capabilities of fire fighters</b>  | <b>Protection of people and structures</b> by direct fire fighting capability enhancements. | <b>Rural and Wildland Fire Districts</b> working with the <b>BLM, IDL, and USFS</b> for wildland training opportunities and with the <b>State Fire Marshall's Office</b> for structural fire fighting training. | <ul style="list-style-type: none"> <li><b>Year 1 (2005):</b> Develop a multi-county training schedule that extends 2 or 3 years in advance (continuously).</li> <li>Identify funding and resources needed to carry out training opportunities and sources to acquire.</li> <li><b>Year 1 (2005):</b> Begin implementing training opportunities for volunteers.</li> </ul> |
| <b>5.4.h: Facility, land, business plan and basic supplies for new station of the Big Canyon Fire Department near Medley subdivision on Woodhaven Dr.</b> | <b>Protection of people and structures</b> by direct fire fighting capability enhancements. | <b>Clearwater Resource Conservation and Development Council</b> in cooperation with Commissioners and fire districts.   | <ul style="list-style-type: none"> <li>Estimate of Costs: <ul style="list-style-type: none"> <li>\$50,000</li> </ul> </li> <li><b>2 Year Planning Horizon</b></li> </ul>  |
| <b>5.4.i: safety equipment</b>  | <b>Protection of people and</b>   | <b>Clearwater Resource</b>  | <ul style="list-style-type: none"> <li>Complete an inventory</li> </ul>   |

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**Table 5.4. WUI Action Items in Fire Fighting Resources and Capabilities.**

| <b>Action Item</b>                       | <b>Goals and Objectives</b>  | <b>Responsible Organization</b>   | <b>Action Items &amp; Planning Horizon</b>  |
|--|--|---|---|
| <b>for all RFDs in Nez Perce County.</b> | <b>structures</b> by direct fire fighting capability enhancements. | <b>Conservation and Development Council</b> in cooperation with Commissioners and fire districts. | of all supplies held by the RFDs (boots, turnouts, Nomex, gloves, modern lighting, straps, and hardware), and complete a needs assessment matching expected replacement schedule. <ul style="list-style-type: none"><li>• Develop county-wide re-supply process for needed equipment.</li></ul> |

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## ***5.7 Regional Land Management Recommendations***

In section 5.4 of this plan, reference was given to the role that forestry, grazing and agriculture have in promoting wildfire mitigation services through active management. Nez Perce County is dominated by wide expanses of forest and rangelands intermixed with communities and rural houses.

Wildfires will continue to ignite and burn fuels and homes depending on the weather conditions and other factors enumerated earlier. However, active land management that modifies fuels, promotes healthy range and forestland conditions, and promotes the use of these natural resources (consumptive and non-consumptive) will insure that these lands have value to society and the local region. We encourage the Bureau of Land Management, the Idaho Department of Lands, the Nez Perce Tribe, Industrial land owners, private land owners, and all other landowners in the region to actively administer their Wildland-Urban Interface lands in a manner consistent with the policy of reducing fuels and risks in this zone.